

The Impact of Incentives on Survey Participation and Reports of Intimate Partner and Sexual Violence

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Abstract

An incentive experiment was implemented in the National Intimate Partner and Sexual Violence Survey (NISVS) Pilot Study. The NISVS Pilot is a nationwide random-digit-dial survey that collected sensitive information on the perpetration and victimization of four types of violence from adults 18 years of age and older. Sampled telephone numbers were pre-assigned to receive either a \$10 or \$20 incentive payment upon completion of the interview. In this paper, we compare response rates, refusal rates, and substantive differences on key estimates by incentive group. Due to the sensitive nature of the survey questions, the NISVS pilot also includes a series of questions about the respondent's reactions to the survey. We analyze the potential impact of differing incentives on the respondent's reactions to questions about intimate partner violence and sexual violence.

Introduction

In addition to facing the challenge of declining response rates, telephone survey methodologists also face challenges when conducting "sensitive topic" surveys that are feared to lower response rates. A traditional method of increasing survey participation is to offer potential respondents a monetary incentive for their participation. While a wide variety of research has shown that incentives improve response rates, there is limited research on what monetary amount is a sufficient payment for respondents.

Implementing an incentive plan is a cost effective way for surveys to improve response rates and lower refusal rates, and could, over the course of data collection, actually reduce costs and burden to respondents by reducing the need for additional calls to potential respondents. In addition, increasing the response rate will increase the likelihood that information provided by survey participants will be representative of the sample and will maximize the utility of all information provided by study participants. However, it will be most cost effective for survey researchers to offer the lowest possible amount for incentive payments to respondents while still achieving the "boost" to response rates.

An experiment manipulating the incentive amount was used in the National Intimate Partner and Sexual Violence Survey (NISVS) Pilot Study. The NISVS Pilot is a nationwide random-digit-dial survey that collected information from adults 18 years of age and older on perpetration and victimization experiences with physical aggression, sexual violence, stalking, and psychologically aggressive behaviors.

One aim of the NISVS Pilot is to provide information that may help to inform efforts to improve response rates on sensitive topic surveys. Sampled telephone numbers were pre-assigned to receive either a \$10 or \$20 incentive payment upon completion of the interview in order to determine if this differential incentive would have an effect on response and refusal rates, as well as the reporting of "sensitive" behaviors. Thus, the NISVS Pilot Study included an evaluation of two incentive levels (\$10 and \$20) to determine if participation rates differed between the two groups

Additionally, we included a \$1 bill with an advanced address-matched introductory letter as a token of appreciation for considering the survey request and to increase response rates,

Literature Review

It has been demonstrated that providing incentives is likely to increase cooperation from sample members in some methods of data collection (Dillman, 2000; Duffer et al., 1994), but evidence in telephone surveys is less supportive. However, there is little information available with respect to specific incentive amounts and their impact on participation in studies of violence-related behaviors. Research has shown that higher incentives generally yield higher response rates (Church, 1993; Yu and Cooper, 1983). It has also been demonstrated that incentives have significantly greater effects in surveys where the response rate without an incentive is low (Church, 1993; Yu and Cooper, 1983), as is the case for telephone surveys in general. However, other research has shown that the incentive amount does not have a significant effect on response rates (Singer et al., 2000).

The survey research literature has also consistently shown that providing a small, pre-paid incentive increases response rates in the range of 10% to 30% (Dillman, 2000). Two studies show that offering up-front incentives reduced the cost of completing interviews relative to an increase in respondent incentive (Duffer et al., 1994; Warriner et al., 1996).

Methods

Hypothesis

It was hypothesized that the incentive amount offered to respondents would increase response rates and decrease refusal rates, with greater participation and fewer refusals occurring for respondents offered \$20 for completion of the interview versus \$10.

Sample

The target population for the NISVS Pilot Study was adults over the age of 18 living in households with telephones. The sample utilized a stratified list-assisted random-digit-dial (RDD) design, and the interview was conducted using a computer-assisted telephone interview system (CATI). The RDD and listed sampling frames were stratified by the four Census regions (Northeast, Midwest, South, and West) and the generated sample sizes for each region were developed to result in completed interviews proportional to 2005 Census region population estimates. Once the RDD and listed telephone numbers were selected, the RDD telephone numbers were screened by Genesys to eliminate known non-working and business numbers. The total sample size was 33,596 cases.

The sample file was randomly divided into replicates of approximately 100 cases for release to the telephone interviewers in an effort to control the final number of completed interviews. Embedded in the survey were three experiments: two orders of questions (victimization questions followed by perpetration questions or perpetration questions followed by victimization questions), three introductory contexts (crime, health, or personal relationships), and two incentive amounts (\$10 or \$20). Within region and sampling frame, telephone numbers were randomly assigned to receive either a \$10 or \$20 incentive, upon completion of the survey.

For households with only one adult male or one female, that person was selected. For households with both males and females, we randomly selected one sex. In an effort to achieve an approximately equal number of interviews by sex, we compensated for the

lower cooperation rate of males by oversampling males. In households containing more than one eligible male /female, we selected one respondent using the most recent birthday technique.

Survey Instrument

The survey instrument was comprised of six main sections.

- § Respondent characteristics
- § Context questions (crime, health, or personal relationships)
- § Victimization (stalking, sexual violence, physical aggression, psychological aggression)
- § Perpetration (stalking, sexual violence, physical aggression, psychological aggression)
- § Programs and counseling experiences
- § Respondent reactions to the survey

The average survey length was approximately 29 minutes.

Data Collection

All cases for which we were able to obtain an address were sent a lead letter introducing the study along with a \$1 token of appreciation for considering the survey request. Data collection began one week later on January 8, 2007, and continued for fifteen weeks until April 25, 2007. There were a total of 5,180 completed interviews and an additional 116 partially completed interviews (defined as completing either the entire victimization or perpetration section). The overall response rate was 21.5% (AAPOR Response Rate #4).

Analysis

The analysis was run on all completed cases. The data were weighted to be representative of the U.S. population. A difference in proportions was utilized to test for significant differences in response and refusal rates. Chi square analysis was used to evaluate significant differences in individual items, overall item summaries, and respondent reactions.

Results

To evaluate the impact of the incentive amount (e.g., offering \$10 versus \$20 to respondents) we first looked at differences in response and refusal rates. Next, we looked at the reported prevalence rates of four types of violence-related behaviors (stalking, sexual violence, physical aggression, and

psychological aggression) for both victimization and perpetration experiences.

Response and Refusal Rates

We calculated response rates using AAPOR Response Rate #4 and refusal rates using AAPOR Refusal Rate #2. **Table 1** shows that respondents who were offered the \$20 incentive for completing the interview were significantly more likely to participate compared to those in the \$10 incentive group (22.4% vs. 20.6%, respectively). Respondents who were offered the \$10 incentive were significantly also more likely to refuse than those who were offered \$20 for completing the interview (45.7% vs. 44.3%, respectively).

Victimization Behavior Reports

Respondents were asked about their experiences as a victim of stalking, sexual violence, physical aggression, and psychological aggression by an intimate partner. Below we evaluate whether respondent victimization reports for these four types of violence differed based on whether the respondent was offered \$10 versus \$20 for completion of the interview.

Victimization reports of stalking behaviors.

Respondents were asked whether they experienced ten different types of stalking behaviors such as being followed, receiving unwanted telephone calls, or having their property vandalized. Cases where the respondent stated he/she had experienced at least one of the ten behaviors and reported either being very anxious or frightened or fearing bodily harm to themselves or someone close to them were flagged as having experienced stalking. **Table 2** shows that no significant differences were observed in reports of overall stalking victimization or for reports of any of the ten individual behaviors based on incentive amount.

Victimization reports of sexual violence.

Respondents were asked if they had experienced someone having or attempting to have unwanted sex with them. Cases where the respondent stated he/she has experienced either completed or attempted unwanted sex were flagged as reporting experiencing sexual violence. There were no significant differences in reports of sexual violence victimization based on incentive amount (see **Table 3**).

Victimization reports of physical aggression.

Respondents were asked whether they experienced any of 13 physically aggressive behaviors. The items

ranged from being “pushed or shoved” to someone “using a gun or knife” on them. Respondents who reported experiencing at least one of the 13 behaviors were coded as experiencing physically aggression by an intimate partner¹. **Table 4** shows that no significant differences were observed for overall reports of physically aggressive behaviors based on incentive amount. Only one of the 13 individual items showed significant differences between incentive groups. Those in the \$20 group were more likely to report being hit with an object by an intimate partner than were those in the \$10 group (38.5% vs. 31.0%, respectively).

Victimization reports of psychologically aggressive behaviors. Respondents were asked to indicate whether they experienced any of 12 psychologically aggressive behaviors (e.g., having a partner who was jealous or possessive, who put them down in front of others, or who kept them from having access to the family income). Those who responded yes to two or more of the 12 behaviors were coded as experiencing psychological aggression overall. **Table 5** shows that no significant differences were found for either overall psychologically aggressive reports or for any of the 12 individual behaviors by incentive group.

Perpetration Behavior Reports

Respondents were also asked about their experiences as a perpetrator of stalking, sexual violence, physical aggression, and psychological aggression. Interviewers stressed the shift between types of questions being asked of respondents. For example, respondents were told “The previous section asked about things that may or may not have been done to you. The next series of questions asks about things you may or may not have done since your 18th birthday.” Below we evaluate whether respondent perpetration reports for these four types of violence differed based by incentive level.

Perpetration of stalking behaviors. Respondents were asked the same ten stalking items with the focus shifting to whether they had ever behaved in these ways towards someone else. Respondents who indicated they had perpetrated one or more of the ten behaviors were coded as perpetrating stalking. **Table 6** shows that those in the \$10 incentive group were significantly more likely to report stalking perpetration compared to those in the \$20 incentive group (10.9% vs. 6.9%, respectively). Significant

¹ Intimate partner was defined as current or former: spouse/live-in partner, boyfriend/girlfriend, fiancé, person you were dating, or first date.

differences between the incentive groups was observed for four of the individual stalking behaviors; for all four behaviors respondents who were offered \$10 had higher reports. These included: leaving unwanted items for someone to find (1.1% vs. .4%), monitoring someone's communication (3.1% vs. .9%), showing up unexpectedly somewhere where someone was (1.2% vs. .5%), and sending unwanted communications to someone (1.4% vs. .5%).

Perpetration of sexual violence. Respondents were asked whether they had or attempted to have unwanted sex with someone. **Table 7** shows there was no significant difference in reporting of sexual violence perpetration between by incentive amount.

Perpetration of physical aggression. Respondents were asked the same 13 physical aggression questions with a focus on whether they had perpetrated any of these behaviors. **Table 8** shows no significant differences in reporting for either overall physically aggressive behaviors or any of the 13 individual items based on incentive amount.

Perpetration of psychological aggression. Respondents were asked the same 12 psychologically aggressive items with a focus on whether they had perpetrated these behaviors on an intimate partner. No significant differences were observed in reports of overall psychologically aggressive behaviors perpetration or for any of the individual 12 items between incentive groups (see **Table 9**).

Respondent Reactions

At the end of the survey, we evaluated respondent reactions to see if they differed between the two incentive amounts. Respondents were asked a series of 11 questions about their reactions to participating in the survey. For this analysis, we looked at four questions. Respondents were asked whether they thought a survey like this should ask questions like these; if they still would have participated if they had known in advance what participating in the survey would be like for them; if they still would have participated if they had known the subject matter in advance; and how upset completing the survey made them feel. As shown in **Table 10**, no differences in the reactions were observed between respondents who were offered \$10 versus \$20 for completing the interview. For both groups, over 90% of respondents agreed that a survey like this should ask questions like these, and they still would have participated had they known in advance what participating would have been like or known the subject matter in

advance. Further, less than 10% of respondents indicated that completing the survey made them feel either a little or very upset.

Discussion

While the use of incentives is well-documented as a method of increasing response rates, there has been less literature focused on whether incentives for sensitive topic telephone surveys would increase response rates, while simultaneously decreasing refusal rates. Maximizing response rates is particularly important for surveys focused on sensitive topics such as interpersonal violence, where initial refusals and reluctant participation may adversely affect the accuracy of reporting violent behaviors. The NISVS Pilot Study incentive experiment shows that the higher incentive amount of \$20 did significantly increase the response rate by approximately 2%. We also found that respondents who were offered \$10 were significantly more likely to refuse participation than those who were offered \$20. Therefore, our hypotheses were supported.

We also looked at reports regarding four types of violence and found relatively few differences for either victimization or perpetration reports. Specifically, in terms of victimization reports, no differences were observed in any of the rates for any of the four individual violence types by incentive group. Further, of the 37 individual victimization behaviors asked about, only 1 (or 3%) showed significant differences in reports between the two incentive groups, with the \$20 group having a higher report of one physically aggressive behavior than those in the \$10 incentive group.

For reporting of perpetration behaviors, the only difference in reporting was for stalking, with those in the \$10 incentive group reporting higher rates than those in the \$20 incentive group. Of the 37 individual perpetration behaviors asked about, 4 (11%) showed significant differences in reports between the two groups. All 4 of these differences were for individual stalking behaviors and the \$10 incentive group had higher reports than the \$20 incentive group.

Finally, respondent reactions to the survey were very similar between the two groups. In summary, while differences were observed for approximately 5 of the intimate partner and sexual violence individual and summary behaviors asked about, the magnitude of these differences was very small (in the 2-3% range) as was the number of cases for the individual items. In practical terms, these results suggest that there

were no major differences between the reports of respondents based on the incentive that they were offered.

References

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Table 1. Response and refusal rates by incentive amount.

	\$10	\$20	p
Response Rate	20.6%	22.4%	0.001
Refusal Rate	45.7%	44.3%	0.05

Table 2. Stalking victimization reports by incentive amount.

	\$10		\$20		x ²	p
	n	%	n	%		
Overall	352	13.9	417	15.8	3.7	0.19
Followed/Spied	327	13.4	386	15.3	4.0	0.18
Sent unwanted letters	190	7.6	226	9.0	3.4	0.2
Stood outside home, etc.	270	12.2	309	12.4	0.1	0.86
Left unwanted items	107	4.7	110	4.2	0.6	0.63
Sent unwanted presents	124	5.4	123	5.1	0.3	0.74
Monitored communications	177	8.1	176	6.8	3.3	0.24
Vandalized property	371	15.0	377	14.2	0.7	0.56
Showed up unexpectedly	243	9.9	290	12.1	5.9	0.10
Made unwanted phone calls	473	19.3	545	21.3	3.1	0.23
Sent emails	111	5.5	104	4.7	1.5	0.43

Table 3. Sexual violence and attempted sexual violence victimization reports by incentive amount.

	\$10		\$20		x ²	p
	n	%	n	%		
Sexual violence	387	13.7	434	14.9	1.6	0.38

Table 4. Physical violence victimization reports by incentive amount.

	\$10		\$20		χ^2	p
	n	%	n	%		
Overall	609	23.1	717	24.4	1.2	0.42
Throw something	283	49.4	361	53.2	2.0	0.32
Push, grab, or shove	482	80.3	587	82.0	0.6	0.57
Pull hair	185	30.3	227	32.0	0.4	0.66
Slap or hit	395	65.2	518	70.2	3.8	0.19
Kick or bite	151	28.1	199	28.7	0.1	0.88
Choke or strangle	155	27.0	158	23.9	1.7	0.38
Hit with an object	182	31.0	250	38.5	8.0	0.05
Beat up	171	25.4	197	27.2	0.6	0.59
Threaten with gun	100	16.8	129	19.0	1.1	0.48
Threaten with knife, other weapon	107	16.9	132	20.4	2.6	0.26
Attempt to drown	6	1.2	6	1.3	0.0	0.91
Use a gun	35	5.5	39	5.9	0.1	0.84
Use a knife, other weapon	57	10.1	70	10.3	0.0	0.94

Table 5. Negative emotional behaviors victimization reports by incentive amount.

	\$10		\$20		χ^2	p
	n	%	n	%		
Overall	1268	53.6	1454	55.2	1.2	0.43
Hard time seeing other point of view	1078	84.2	1257	85.6	1.1	0.50
Been jealous/possessive	955	77.3	1097	77.0	0.0	0.91
Tried to provoke	974	78.6	1140	78.9	0.0	0.92
Limit contact with family, friends	560	46.1	633	42.3	4.1	0.16
Put down in front of others	811	60.7	911	60.7	0.0	0.99
Feel inadequate on purpose	765	58.7	892	60.3	0.7	0.55
Shouted or sworn	1144	89.2	1284	88.6	0.3	0.74
Thrown objects/broken things when angry	572	46.5	652	44.7	1.0	0.49
Intentionally frightened	425	29.9	465	31.5	0.8	0.52
Prevented access to family income	236	17.2	291	17.4	0.0	0.94
Prevented working outside the home	110	8.7	106	8.4	0.1	0.87
Insisted on knowing who you're with	488	43.8	544	41.0	2.2	0.31

Table 6. Stalking perpetration reports by incentive amount.

	\$10		\$20		X ²	p
	n	%	n	%		
Overall	253	10.9	207	6.9	25.5	0.001
Followed/Spied	87	3.4	68	2.5	3.9	0.16
Sent unwanted letters	28	1.3	34	1.3	0.0	0.99
Stood outside home, etc.	39	2.2	46	1.5	3.5	0.21
Left unwanted items	14	1.1	11	0.4	10.5	0.03
Sent unwanted presents	9	0.6	9	0.3	2.3	0.32
Monitored communications	59	3.1	30	0.9	30.4	0.001
Vandalized property	48	2.8	56	1.9	4.9	0.14
Showed up unexpectedly	30	1.2	19	0.5	7.2	0.04
Made unwanted phone calls	108	4.3	91	3.1	5.2	0.11
Sent emails	20	1.4	14	0.5	12.0	0.02

Table 7. Sexual violence and attempted sexual violence perpetration reports by incentive amount.

	\$10		\$20		X ²	p
	n	%	n	%		
Sexual violence	39	2.1	51	1.9	0.3	0.72

Table 8. Physical violence perpetration reports by incentive amount.

	\$10		\$20		X ²	p
	n	%	n	%		
Overall	391	16.3	470	15.9	0.1	0.82
Throw something	164	45.3	195	43.3	0.3	0.68
Push, grab, or shove	277	72.2	331	71.6	0.0	0.90
Pull hair	56	16.0	73	17.5	0.4	0.69
Slap or hit	216	58.2	278	61.2	0.8	0.54
Kick or bite	58	17.4	76	18.4	0.1	0.81
Choke or strangle	17	5.4	21	5.4	0.0	0.98
Hit with an object	77	22.1	92	21.2	0.1	0.83
Beat up	35	13.0	63	16.9	2.7	0.31
Threaten with gun	14	4.6	20	3.2	1.2	0.41
Threaten with knife, other weapon	28	7.1	29	7.6	0.1	0.84
Attempt to drown	0	0.0	0	0.0		
Use a gun	5	2.1	8	1.5	0.6	0.53
Use a knife, other weapon	15	5.0	12	3.2	1.9	0.41

Table 9. Negative emotional behaviors perpetration reports by incentive amount.

	\$10		\$20		X ²	p
	n	%	n	%		
Overall	1000	42.2	1101	42.4	0.0	0.91
Hard time seeing other point of view	780	76.6	884	78.7	1.3	0.43
Been jealous/possessive	603	59.0	664	60.9	0.8	0.53
Tried to provoke	449	46.9	510	48.0	0.3	0.71
Limit contact with family, friends	93	9.8	109	10.6	0.4	0.68
Put down in front of others	476	47.1	533	46.1	0.2	0.75
Feel inadequate on purpose	360	35.3	390	34.8	0.1	0.85
Shouted or sworn	911	88.5	1014	89.7	0.7	0.60
Thrown objects/broken things when angry	355	35.9	375	36.0	0.0	0.96
Intentionally frightened	99	12.6	112	10.5	2.1	0.32
Prevented access to family income	72	7.4	85	7.5	0.0	0.95
Prevented working outside the home	9	1.3	9	0.6	3.6	0.16
Insisted on knowing who you're with	131	16.2	115	13.8	2.4	0.34

Table 10. Respondent reactions by incentive amount.

	\$10		\$20		x ²	p
	n	%	n	%		
Survey should ask questions like these	2127	91.3	2325	92.3	1.8	0.34
Still participated if known in advance what participating was like	2251	92.7	2499	93.9	2.7	0.26
Still participated if known subject matter in advance	2252	93.3	2499	94.3	2.3	0.25
Completing survey upset respondent	277	9.5	293	9.1	0.2	0.74